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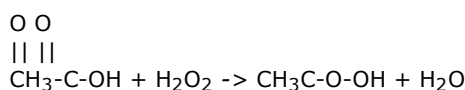


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Disinfectants Peracetic acid

Peracetic acid

Peracetic acid (C₂H₄O₃) is a mixture of acetic acid (CH₃COOH) and [hydrogen](#) peroxide (H₂O₂) in bright, colorless liquid that has a piercing odor and a low pH value (2,8). Peracetic acid is produced by hydrogen peroxide and acetic acid:



acetic acid + hydrogen peroxide -> peracetic acid

Peracetic acid can also be produced by [oxidation](#) of acetaldehyde. Peracetic acid is usually produced in 5-15%.

When peracetic acid dissolves in water, it disintegrates to hydrogen peroxide and acetic acid, with [oxygen](#) and [carbon dioxide](#). Peracetic acid degradation products are non-toxic and can easily be removed. Peracetic acid is a very powerful oxidant; the oxidation potential outranges that of [chlorine](#) and

What are the applications of peracetic acid?

Peracetic acid is used mainly in the food industry, where it is applied as a cleanser and as a [disinfectant](#). It was also used when acetic acid was applied for bacteria and fungi removal from fruits and vegetables. It was also used for rinsing water for foodstuffs.

Nowadays peracetic acid is applied for the disinfection of medical supplies and to prevent [bio film](#) formation. It can be applied during [water purification](#) as a disinfectant and for plumbing disinfection.

Peracetic acid is suitable for [cooling tower](#) water disinfection; it effectively prevents bio film formation on bacteria.

How does peracetic acid disinfection work?

Peracetic acid as a disinfectant oxidizes the outer cell membranes of microorganisms. The oxidation occurs via electron transfer. When a stronger oxidant is used, the electrons are transferred to the microorganism to be deactivated rapidly.

Table 1: oxidation capacity of various disinfectants

Disinfectant	EV (elektronic volts)
Ozone	2,07
Peracetic acid	1,81
Chlorine dioxide	1,57
Sodium hypochlorite	1,36

Peracetic acid affectivity

Peracetic acid can be applied for the deactivation of a large variety of pathogenic microorganisms.